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Southern Forestry Notes



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BIGGEST SOUTHERN PULPWOOD HARVEST

More than 23-1/2 million cords of pulpwood--an all-time high--were cut in the South during 1960. The harvest was 4 percent larger than that of 1959, and supplied 57 percent of all wood used by the Nation's pulpmills during the year.

Some 20,595,500 cords were delivered to mills as bolts. Of this, more than 80 percent was pine, which went to 63 of the South's 81 mills. Hardwood bolts totaled 4,104,600 cords--9 percent more than in 1959.

Another 2,877,300 cords--21 percent more than in 1959--was in the form of chips from other wood-using plants. At least 896 sawmills, veneer mills, and other southern forest industries now have chip-making machinery. Unchipped residues from veneer mills and wood-preserving plants totaled 78,200 cords.

Pulping capacity in the South continues to rise. During 1960 total mill capabilities increased from 46,000 tons of pulp per day to 50,000 tons. Six new mills are planned or under construction.

A report on 1960 pulpwood production in the South is available on request.--J.F. Christopher.

COMPLETE RELEASE BEST ON CUMBERLAND PLATEAU

Best growth of planted loblolly pines on Tennessee's Cumberland Plateau is obtained where all overtopping hardwoods are eliminated. Partial release also boosts height growth, but not so much as complete control. These effects of release are well known in the Coastal Plain but are less widely recognized on the Plateau, where initial survival is generally high in spite of hardwood competition.

On an experimental area near Sewanee, loblolly seedlings were planted in March 1958 under a heavy canopy of low-grade oaks and hickories and released the next month. The most intensive release consisted of girdling hardwoods 4 inches d.b.h. and over, cutting smaller stems, and spraying girdles and stumps with 2,4,5-T in oil. For partial release, either overstory or understory hardwoods were treated, again with silvicide. Each level of hardwood control was also tested without silvicide.

After 3 years, pines were tallest where both understory and overstory competition had been eliminated--heights averaged 6.2 feet where silvicide had been used and 4.5 feet where hardwoods had simply been cut or girdled. Seedlings on unreleased check plots averaged 1.5 feet in height. Partial treatments, even with silvicides, gave inadequate release. Pines attained 3.1 feet after removal of overstory hardwoods only and 3.8 feet with understory control only. Comparable treatments without 2,4,5-T produced seedlings 2.7 and 2.1 feet tall.

Less than 10 percent of the seedlings died during the first two years, whether released or not. After three growing seasons, survival ranged from 89 to 98 percent on released plots but had dropped to 77 percent for unreleased seedlings.--*T.E. Russell.*

BORATE EFFECTS AFTER THREE YEARS

In December 1957 a fire-retardant slurry of sodium-calcium borate was sprayed on some Louisiana forest areas in amounts adequate for operational firelines. Pines and other vegetation were damaged, but three years later plants appeared well on the way to recovery.

Loblolly, longleaf, and slash pine saplings crown-sprayed with 1 to 2 gallons of slurry per tree averaged 3.2 feet of height growth the second season after treatment and 2.8 feet the third season; untreated trees averaged 3.8 and 3.2 feet. (Height growth was not measured the first year.) The second-

season and two-year differences were statistically significant; those for the third season were not. Species differences were not significant.

Slash pine 1-0 seedlings planted on a fireline treated one year previously with approximately 6.7 gallons of slurry per 100 square feet suffered 28 percent mortality during their first two years, as compared with 3 percent on untreated ground. Seedlings on the fireline averaged 22 inches tall after 2 years; those on untreated ground, 33 inches. Of the survivors on the fireline, 76 percent had good vigor in December 1960, as against 5 percent in October 1959.

Progress of damage symptoms was followed on all types of vegetation exposed to the chemical. Still in 1960, mature needles of pines of all sizes had necrotic tips, crowns of several sawtimber trees appeared thin, and some brush had reddish splotches on the leaves. Hardwood saplings, initially less injured than pines, had apparently recovered completely. Demonstration firelines in the open were visible, but they probably could not have been used for backfiring after the second year.

To try the effect of very heavy applications, three strips in a dense grass rough were sprayed with 10 to 15 gallons of slurry per 100 square feet. After 3 years the strips were still almost bare, and only 3 percent of loblolly seedlings planted on them had survived. Cost permitting, heavy sodium-calcium borate applications would be effective means of preparing permanent firebreaks.--*M.W. Gwinner and G.R. Fahnestock.*

CONTRACT MACHINE PLANTING FAVORED

The typical 1956-57 loblolly pine plantation within a 100-mile radius of Shreveport, Louisiana, was machine-planted by a contractor and the seedlings spaced 6 by 8 feet. Most of the loblolly planting area of Arkansas, Louisiana, and Texas lies within this radius.

In 1958, 109 representative one-year-old plantations were examined. Spacings ranged from 2½ by 6 feet to 10 by 10, but 6 by 8 was the most common. Trees were planted from November 1956 through March 1957; most were set out in January. Site preparation was rare.

Most landowners had their planting done by contractors whom they chose from a list maintained by county agricultural workers.

More than three-fourths of the sampled tracts were planted by machine. Of the 13 makes used, Lowthers, Fallins, Callaways, and Whitfields were the most popular.

All hand planting was by dibble, and averaged 10 man-hours per thousand seedlings. In machine planting, equipment use averaged 1 hour per M, regardless of type. Labor requirements were about 2 man-hours per M with one-man machines and 3 man-hours for two-man machines.--William C. Siegel.

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*Copies are available at the Southern Station.